

2014 LAND INFORMATION INTEGRATION REPORT

August 2014



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INTRODUCTION

Eleven State Agencies are required to annually submit land information (geographic information) reports to the Department of Administration (DOA). These reports—formerly called “plans”—are intended to enable such information to be readily translatable, retrievable, and geographically referenced for use by any federal, state, or local governmental unit or public utility.

All state agencies using geographic information systems/land information systems (GIS/LIS) are encouraged to submit a land information report. This year the reports had two parts, taking the form of an inventory and sharing of state agency metadata. In Part 1, state agencies were asked to provide information about data and resources in a Microsoft Excel spreadsheet. In Part 2, all stewards of geospatial data were asked to submit basic metadata.

OBJECTIVES

Wis. Stats. Section 16.967(1) (b), defines “land information” as:

[A]ny physical, legal, economic or environmental information or characteristics concerning land, water, groundwater, subsurface resources or air in this state. “Land information” includes information relating to topography, soil, soil erosion, geology, minerals, vegetation, land cover, wildlife, associated natural resources, land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessment, land value, land survey records and references, geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections.

Agencies covered by these instructions are named in Wis. Stats. Sec. 16.967(6):

By March 31 of each year, the department of administration, the department of agriculture, trade and consumer protection, the department of safety and professional services, the department of health services, the department of natural resources, the department of tourism, the department of revenue, the department of transportation, the board of regents of the University of Wisconsin System, the public service commission, and the board of curators of the historical society shall each submit to the department a plan to integrate land information to enable such information to be readily translatable, retrievable, and geographically referenced for use by any state, local governmental unit, or public utility. Upon receipt of this information, the department shall integrate the information to enable the information to be used to meet land information data needs. The integrated information shall be readily translatable, retrievable, and geographically referenced to enable members of the public to use the information.

Statutory Objectives from Wis. Stats. Sec. 16.967

- *For Agencies* – Enable agency land information to be readily translatable, retrievable, and geographically referenced for use by any state, local governmental unit, or public utility
- *For DOA* – Integrate the information to enable the information to be used to meet land information data needs. The integrated information shall be readily translatable, retrievable, and geographically referenced to enable members of the public to use the information
- *From 16.967 (b)* – Maintain and distribute an inventory of land information available for this state, land records available for this state, and land information systems

Additional Objectives for DOA

- Update state agency inventories of land information systems
- Categorize all state agency land information framework data layers by standardized ISO categories

- Document a steward and contact for all state agency land information resource holdings
- Determine which state agency land information data and resources have access constraints
- Collect existing state agency land information metadata
- Assess the current state of completeness for state agency land information metadata
- Plan for state agency stewards to update and share land information metadata in the future
- Inform DET FY 2014-15 Strategic initiative planning to establish an Enterprise GIS Portal

In early 2014, geospatial data stewards were asked to complete and submit the workbook by March 31. The inventory data is now available online at http://gio.wi.gov/Land_Information_Reports/Pages/Land_Information_Reports.aspx

INVENTORY DATA AVAILABLE ONLINE

Data Inventory Components Posted Online At gio.wi.gov

- | | |
|----------------------------------|--------------------------------|
| • Agency name | • Update frequency |
| • Spatial data layer file name | • Business area to contact |
| • Title and/or short description | • Resource publicly available? |
| • ISO category | • Steward for layer |
| • Additional tags | • Additional contacts |

CONTACT

Contact Lee Samson at the GIO with any questions.

Lee Samson – Enterprise GIS Architect
 Geographic Information Office
 Wisconsin Department of Administration
 Division of Enterprise Technology
 101 East Wilson Street, PO Box 7844
 Madison WI, 53707-7844

PARTICIPATING ORGANIZATIONS

2014 Participating Organizations

Agencies Required by Statute to Participate	Abbreviation Status	
Board of Curators of the Historical Society	WHS	Submitted
Department of Administration	DOA	Submitted
Department of Agriculture, Trade and Consumer Protection	DATCP	Submitted
Department of Health Services	DHS	Submitted
Department of Natural Resources	DNR	Submitted
Department of Revenue	DOR	Submitted
Department of Safety and Professional Services	DSPS	Submitted
Department of Transportation	DOT	Submitted
Department of Tourism	–	Not submitted
Public Service Commission of Wisconsin	PSCW	Submitted
UW System Board of Regents	–	Not submitted

State Agencies Contacted/Volunteered Information

Commissioners of Public Lands Board	–	Not submitted
Department of Children and Families	–	Not submitted
Department of Corrections	–	Not submitted
Department of Justice	–	Not submitted
Department of Military Affairs	DMA	Submitted
Department of Public Instruction	–	Not submitted
Department of Workforce Development	–	Not submitted
Government Accountability Board	GAB	In Progress
Legislative Technology Service Bureau	LTSB	In Progress
State Fair Park	–	Not submitted
Wisconsin Economic Development Corporation	–	Not submitted
Wisconsin Housing and Economic Development Authority	–	Not submitted
UW-Madison Robinson Map Library	UW-RML	Submitted
UW-Whitewater	UW-W	Submitted

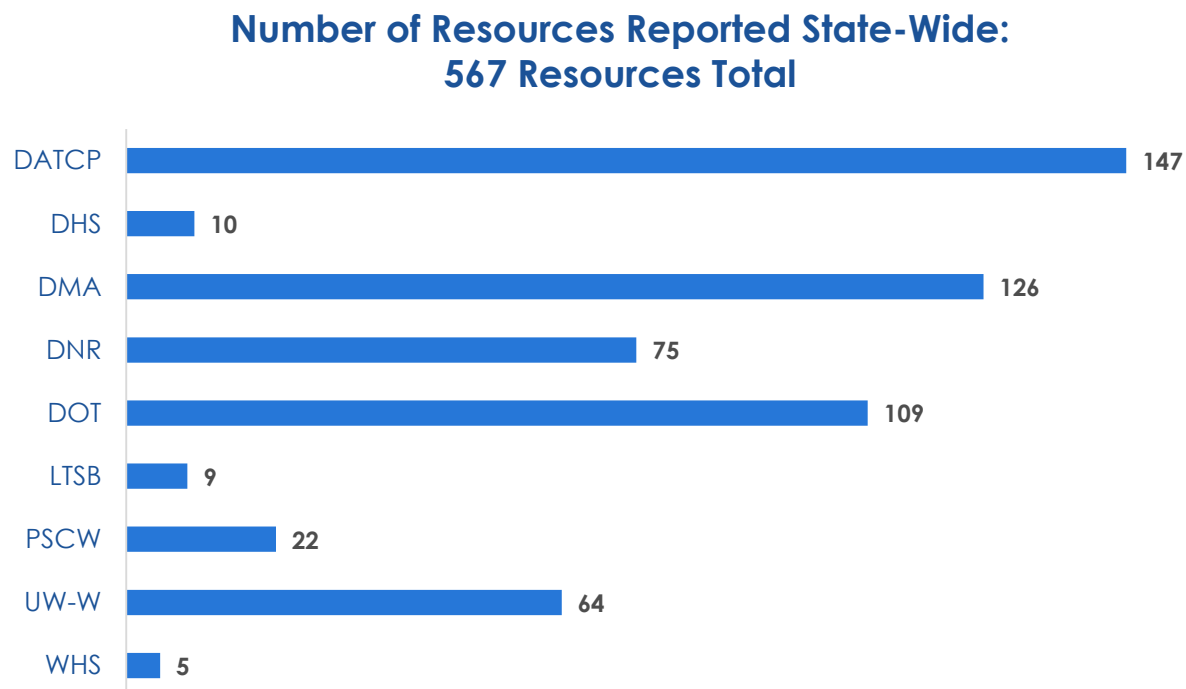
SUMMARY OF DATA INVENTORY

The summary of data inventory charts display statistics based on the number of resources. Resources are defined as spatial data layer files. For those using ESRI ArcSDE, this would be the feature class name, unique in a geodatabase. The total number of resource represents layers reported for the purposes of this inventory, not the total number of layers that exist statewide.

The number of resources for a particular agency depends on many factors including:

- How they have aggregated or disaggregated their data
- The spatial extent of the data
- The business need for data sets
- The number of GIS resources within an agency

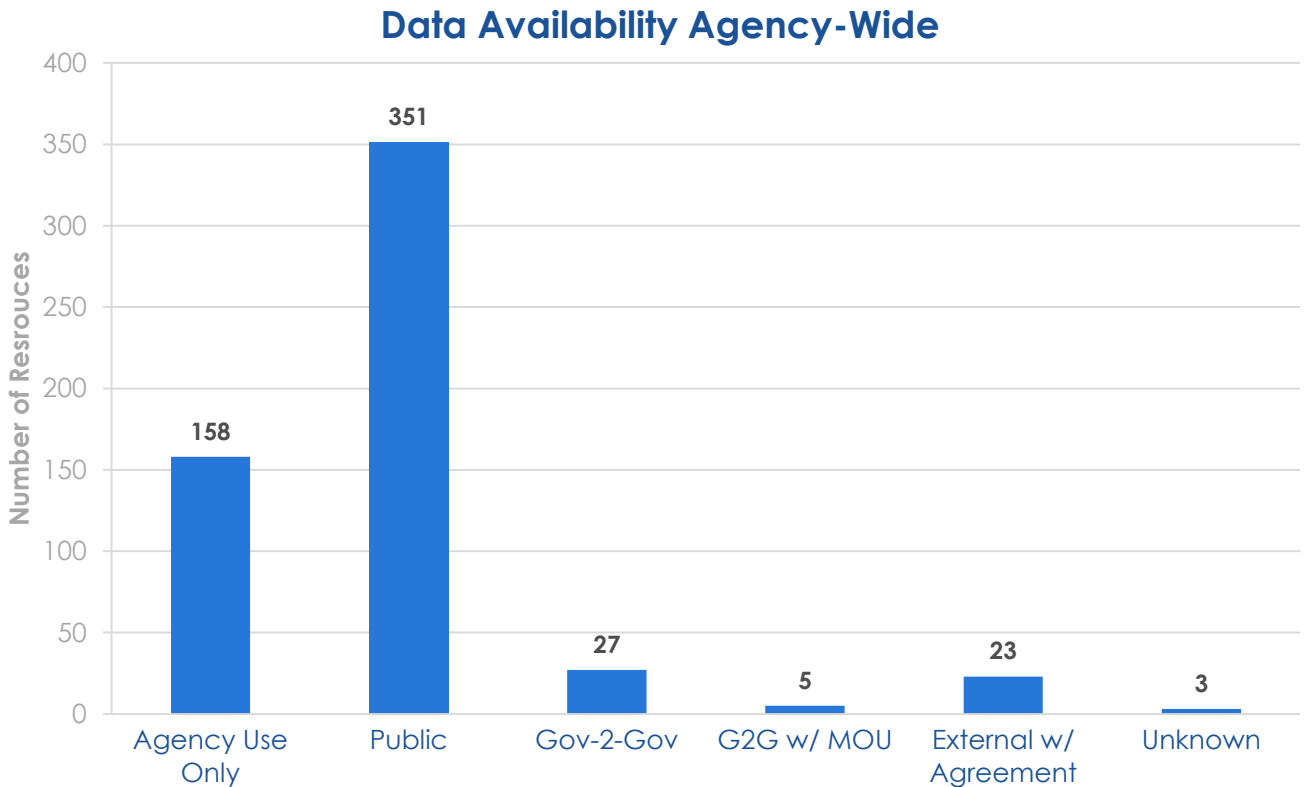
Comparison of resource numbers between agencies should be avoided.



Commentary/Analysis:

This chart shows the number of resources reported for this inventory. The numbers should not be compared between agencies.

This chart should also not be interpreted to imply that a particular agency has produced more or less spatial data resources than it should.



Definitions

- Agency Use Only:** Generally not shared outside the agency
- External w/Agreement:** Publicly shared pending some form of agreement/MOU
- G2G w/MOU:** Government to Government sharing pending agreement/MOU
- Gov-2-Gov:** Government to Government sharing, no special agreement needed
- Public:** Freely open for public use

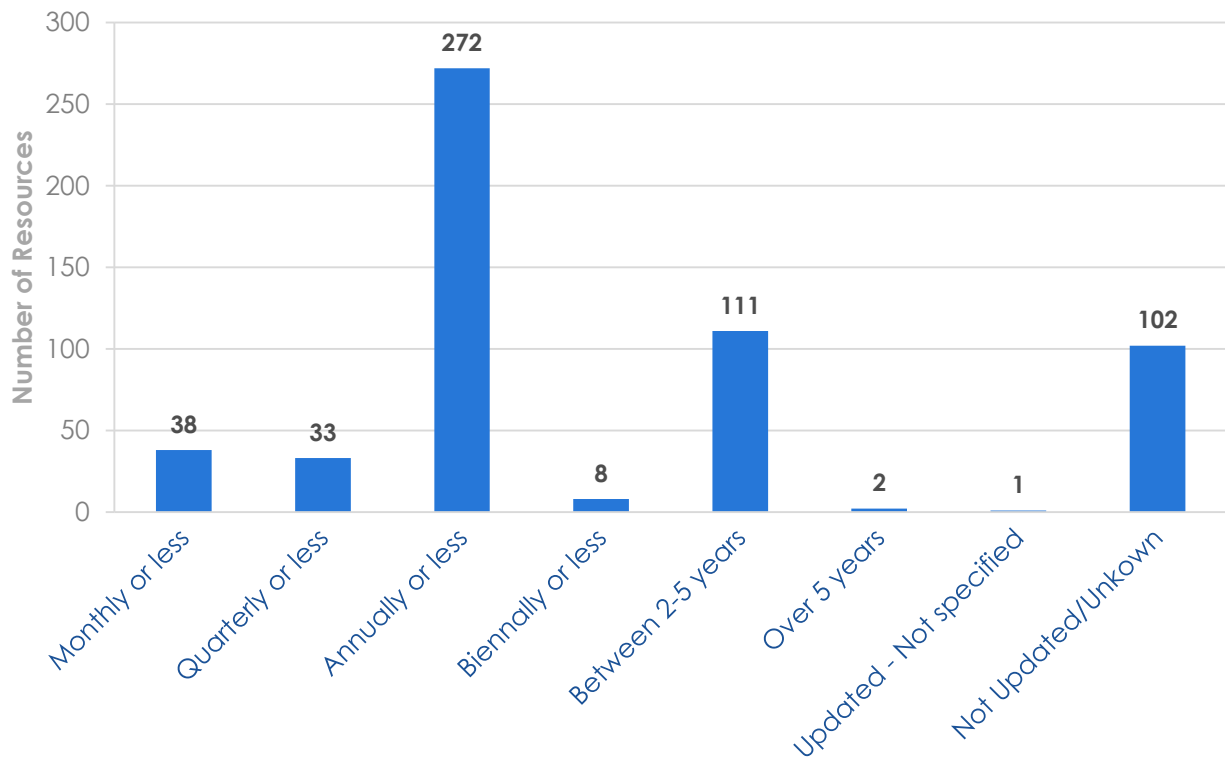
Commentary/Analysis:

This chart shows the data availability reported for all resources. Since it is reporting across all agencies it is skewed toward those agencies with a larger number of resources.

This chart should be interpreted as a commentary on our inventory data collection and classification processes more than anything else.

In some cases, the “Agency Use Only” classification indicates resources that are designed for use within a particular agency and are likely not of much interest or use to others. It may not mean that there are access limits on a particular resource.

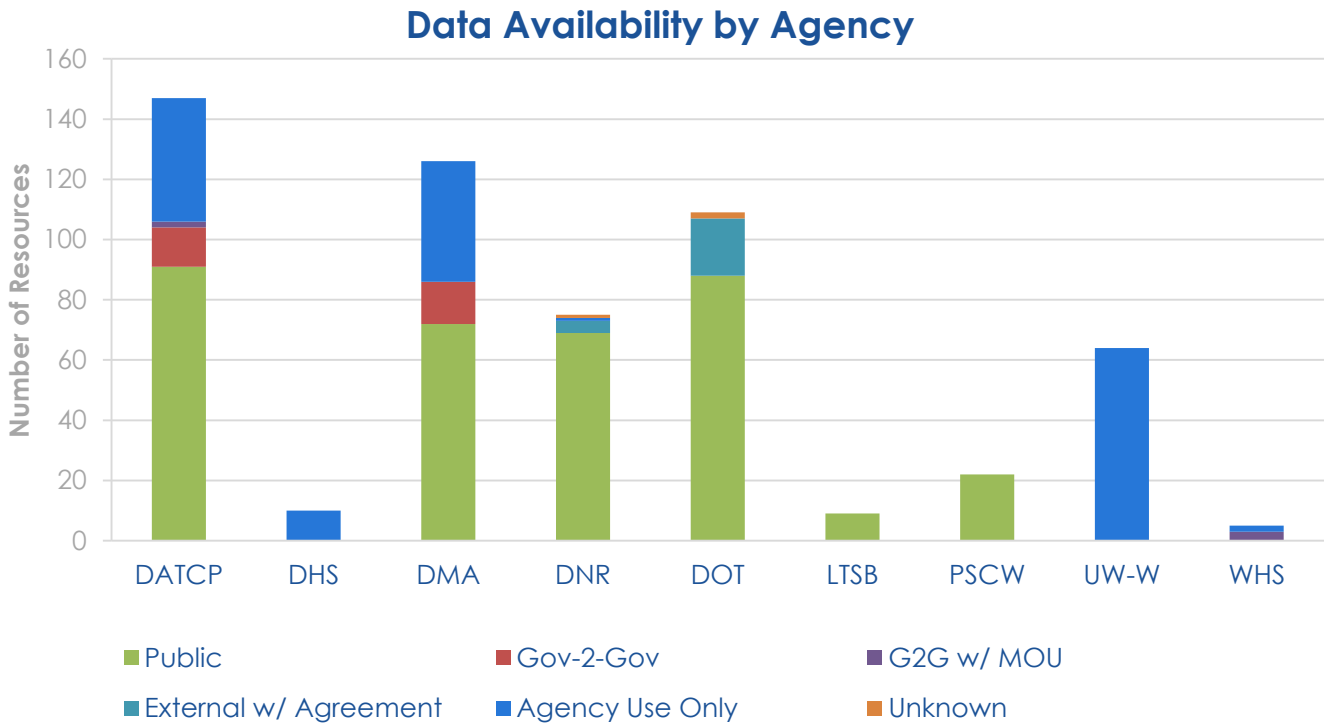
Data Update Frequency Agency-Wide



Commentary/Analysis:

This chart shows the Data Update Frequency Agency-Wide. Since it is reporting across all agencies it is skewed toward those agencies with a larger number of resources.

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Definitions

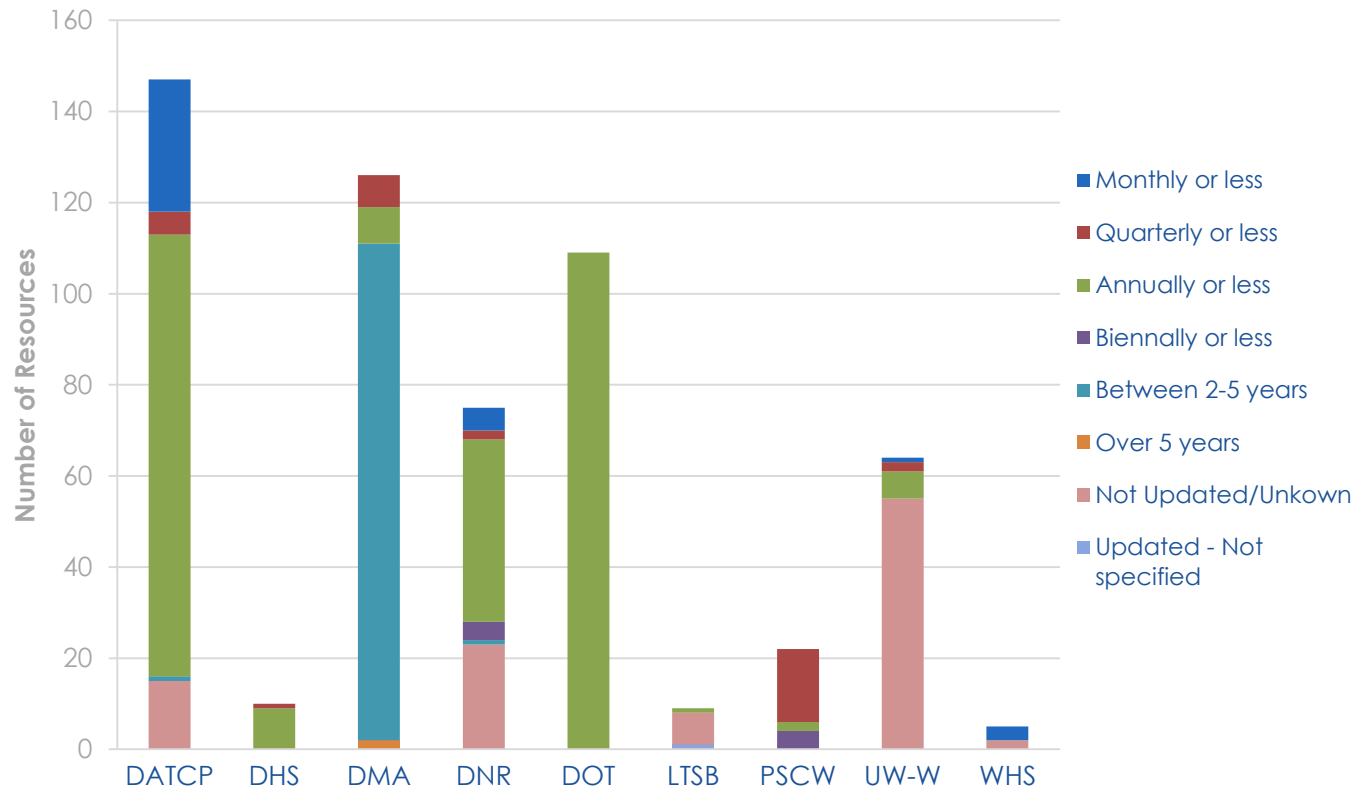
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- Public: Freely open for public use

Commentary/Analysis:

Resource data availability numbers should not be compared between agencies. Different agencies have different business processes and this results in different data availability classifications.

In some cases, the “Agency Use Only” classification indicates resources that are designed for use within a particular agency and are likely not of much interest or use to others. It may not mean that there are access limits on a particular resource.

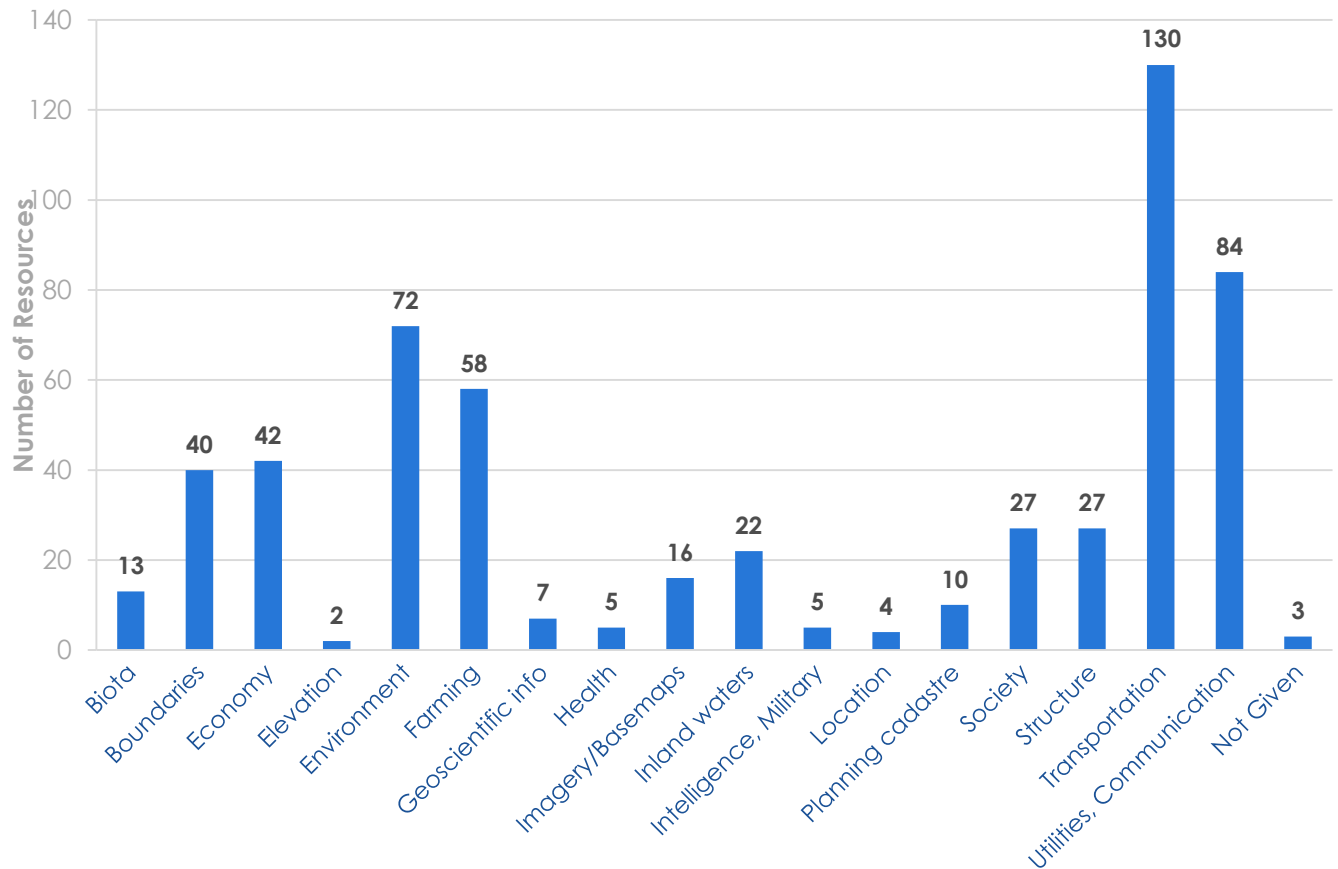
Data Update Frequency By Agency



Commentary/Analysis:

Data Update Frequency numbers should not be compared between agencies. Different agencies have different business processes and this results in different data update frequencies.

Data ISO Categories Agency-Wide



Commentary/Analysis:

This chart shows the Data ISO Categories Agency-Wide. Since it is reporting across all agencies it is skewed toward those agencies with a larger number of resources.

The most important thing to note in this chart is that almost everything is classified. There are only three resources without a classification. This should make future categorization and searching of data sets easier.

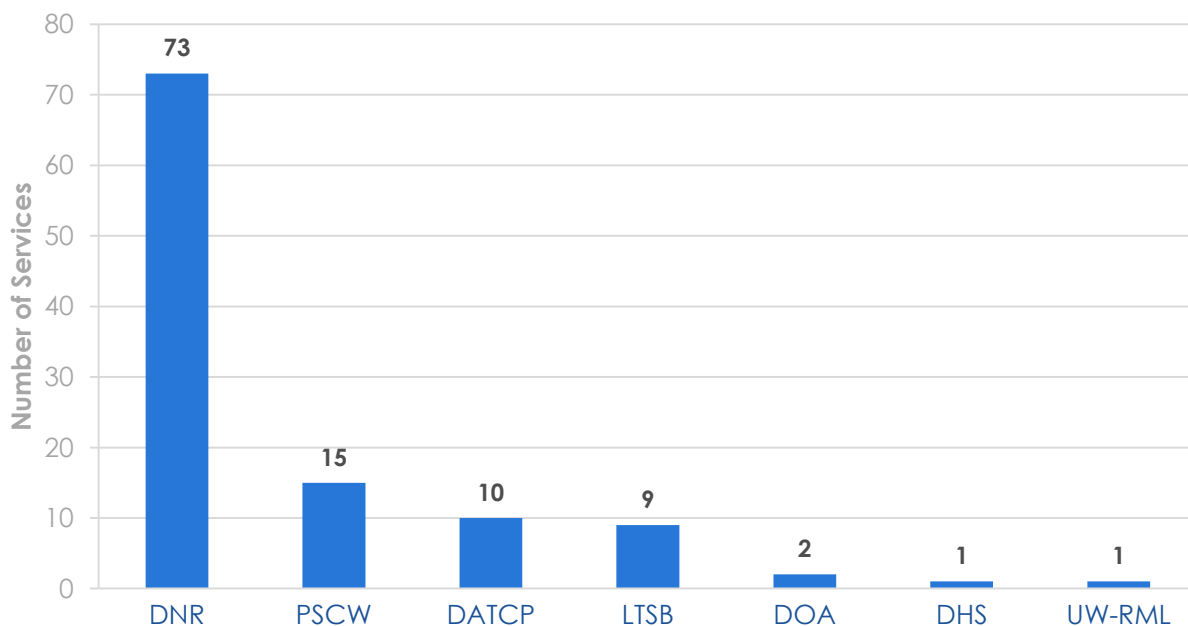
This chart should not be interpreted as a commentary on whether agencies have produced more or less spatial data resources in a particular category than they should have produced.

SUMMARY OF TECH SERVICES

GEOSPATIAL WEB RESOURCES: MAP, FEATURE, DATA AND APPLICATION SERVICES

Along with the data inventory collected, documentation of various *public-facing* services were also compiled. Items requested included Web Mapping, Web Feature, Repository, and Application services. As the inventory is geared towards cataloguing public sources for downloadable data or data services, any internal business services collected are removable at request.

Number of Public-Facing Geospatial Web Resources By Agency



Commentary/Analysis:

These numbers should not be compared between agencies. Different agencies have different business processes and this results in different numbers for geospatial web resources.

This chart combines reporting on two types of web resources: web services and web applications. This might be misleading. For example a web application may or may not use web services to make resources available. A web application might be designed for public use, but its associated web services might not be.

AGENCY GIS TECHNOLOGY USE

Agency Name	Desktop GIS	Server GIS	Development Environments
Natural Resources, Department of	ArcGIS 10.1	ArcGIS 10.1	Geocortex
Agriculture, Trade and Consumer Protection, Department of	ArcGIS 10.1	ArcGIS 10.1	Geocortex
Administration, Department of	ArcGIS 10.2	ArcGIS 10.2	ArcGIS API for JavaScript
Health Services, Department of	ArcGIS 10.2	ArcGIS 10.2	
Military Affairs, Department of	ArcGIS 10.1	ArcGIS 10.1	Other
Public Service Commission of Wisconsin	ArcGIS 10.2	ArcGIS 10.1	ArcGIS API for JavaScript
State Historical Society	ArcGIS 10.0	ArcGIS 10.0	ArcGIS API for Flex
Transportation, Department of	ArcGIS 10.1	ArcGIS 10.1	ArcGIS API for JavaScript
Legislative Technology Service Bureau	ArcGIS 10.2	ArcGIS 10.2	ArcGIS API for JavaScript
University of Wisconsin-Whitewater	ArcGIS 10.1	ArcGIS 10.1	ArcGIS API for JavaScript

Agency Name	GeoCoding	Cloud GIS Utilities	Non-typical GIS Components of Note
Natural Resources, Department of	Other		External collaboration for batch geocoding
Agriculture, Trade and Consumer Protection, Department of	Centrus		
Administration, Department of	DOA		
Health Services, Department of	Centrus	ArcGIS Online	
Military Affairs, Department of			ArcGIS Viewer for Flex
Public Service Commission of Wisconsin			ArcGIS Server 10.1 usage provided by sub-contractor L.R. Kimball. Anticipating transfer of public facing services to DOA-hosted ArcGIS Server 10.2 mid-spring 2014.
State Historical Society	Other		ArcPad 8.0 with Trimble Extension
Transportation, Department of		ArcGIS Online	Cartograph, QGIS
Legislative Technology Service Bureau	Other	ArcGIS Online	
University of Wisconsin-Whitewater	Other	Amazon EC3	

METADATA & RECOMMENDATIONS

METADATA SUBMITTED

Four agencies completely submitted metadata—DNR, DOT, PSCW, and WHS. Much of the DNR's submission was in a PDF format. The DOT, PSCW and WHS submissions were provided in XML format. Along with these, the LTSB and GAB both submitted samples of their metadata in XML, but the full set was never received.

Most agencies did not submit metadata, for various reasons. A likely reason stems from the practices surrounding the creation and maintenance of metadata at the agency-level.

Metadata Submitted

DATCP	Metadata Not Submitted
DHS	Metadata Not Submitted
DMA	Metadata Not Submitted
DNR	Submitted in PDF Format
DOT	Submitted in XML Format
GAB	Partially Submitted in XML
LTSB	Partially Submitted in XML
PSCW	Submitted in XML Format
UW-W	Metadata Not Submitted
WHS	Submitted in XML Format

RECOMMENDATIONS

For future land information reporting, it is advisable to allow agencies to update their data from one year to the next. As a comment on methodology, taking a simple approach and collecting directly usable data through spreadsheets is a preferable alternative to the former narrative approach.

Generally speaking, for future geospatial metadata needs, the community might evaluate the need for standards and standardized practices around the creation and maintenance of metadata, especially as the vision of a statewide Repository/Geoportal draws nearer.